

Retrofits Convert Gas Vehicles Into Hybrids



Glenn Research Center

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NASA Technology

- ◆ Most spacecraft are powered by multiple sources—such as solar, fuel, and battery—working together
- ◆ One initiative at Glenn focused on combining technologies for optimal power systems
- ◆ NASA developed supercapacitors to store energy electrostatically and interface with batteries

Partnership

- ◆ To test the capabilities of supercapacitors, NASA studied their effectiveness in powering a dragster
- ◆ The NASA Illinois Commercialization Center worked with NetGain to turn a gas-powered dragster into a hybrid using the Hybrid Retrofit System (HRS)
- ◆ NASA collected significant data from the tests, and NetGain used the technology to develop electric and HRS engines for vehicles



Benefits

- ◆ The HRS benefits a range of vehicles, but especially short-distance, multiple-stop delivery trucks; these can save 26 percent in fuel costs and see an improvement in performance
- ◆ NetGain's sales help keep 150 dealers in business and support 100 manufacturing jobs; engines repay their cost through savings in about 3 years